

**EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

In claim 1, line 22, the word "the" after the word "sends" has been changed to -a-.

In claim 1, line 23, the word "the" after the word "decodes" has been changed to -a-.

In claim 5, line 4, the word "the" after the word "receives" has been changed to -a-.

In claim 11, line 5, the word "the" after the word "extracting" has been changed to -a-.

In claim 11, line 9, the word "the" after the word "receives" has been changed to -a-.

In claim 12, line 16, the word "the" after the word "receives" has been changed to -a-.

In claim 13, line 7, the word "the" after the word "determines" has been changed to -an-.

In claim 13, line 12, the word "the" after the word "generates" has been changed to -an-.

In claim 15, line 6, the word "the" after the word "and" has been changed to -a-.

In claim 15, line 8, the word "the" after the word "sends" has been changed to -a-.

In claim 15, line 23, the word "the" after the word "decomposes" has been changed to -a-.

In claim 18, line 11, the word “the” after the word “decomposes” has been changed to -a-.

In claim 18, line 19, the word “the” after the word “to” has been changed to -a-.

In claim 20, line 4, the word “the” after the word “encapsulating” has been changed to -a-.

In claim 20, line 9, the word “the” after the word “determining” has been changed to -a-.

In claim 21, line 9, the word “the” has been changed to -an-.

In claim 23, line 3, the word “the” has been changed to -an-.

In claim 24, line, the word “the” after the word “extracting” has been changed to -an-.

In claim 25, line 4, the word “the” after the word “into” has been changed to -a-.

In claim 25, line 4, the word “the” after the word “and” has been changed to -a-.

In claim 25, line 4, the word “the” after the word “encapsulating” has been changed to -a-.

In claim 25, line 5, the word “the” after the word “and” has been changed to -a-.

In claim 27, line 5, the word “the” after the word “into” has been changed to -a-.

In claim 27, line 5, the word “the” after the word “and” has been changed to -an-.

In claim 28, line 5, the word “the” after the word “sends” has been changed to -a-.

In claim 28, line 6, the word “the” after the word “decodes” has been changed to -a-.

In claim 28, line 18, the word “the” after the word “receives” has been changed to -a-.

In claim 28, line 24, the word “the” after the word “of” has been changed to –an–.

In claim 31, line 4, the word “the” after the word “forwards” has been changed to –an–.

2. The following is an examiner’s statement of reasons for allowance:

Re claim 1, the prior art fails to teach an optical fiber transmission system, comprising:

a terminal processing unit including a signal codec module, a terminal frame processing module, and a terminal electric/optical signal processing module,

an optical transmission unit, and

a switch unit with input and output thereof connected with the optical transmission unit, respectively,

wherein the terminal processing unit, connecting with UE (user equipment), used for encapsulating and converting the signal of the LIE to be transmitted into an optical signal and sending the optical signal to the optical transmission unit, as well as for de-encapsulating the signal from the optical transmission unit and sending the signal to the UE;

wherein the optical transmission unit, connecting with the terminal processing unit and the switch unit respectively, used for multiplexing the encapsulated signal sent by the terminal processing unit and sending the multiplexed signal to the switch unit via an optical fiber; as well as for de-multiplexing the signal transmitted from the switch unit via an optical fiber and sending the de-multiplexed signal to the terminal processing unit;

wherein the switch unit, connecting with the optical transmission unit, used for receiving the multiplexed signal from the optical transmission unit at the input side thereof, de-multiplexing the signal, determining the transmission destination of the signal according to the type of the signal and sending out the signal; and at the same time for multiplexing the signal that needs to be transmitted to the optical transmission unit at the output side thereof, converting the multiplexed signal to an optical signal and sending out the signal;

wherein the signal codec module encodes various signals sent by UE and sends the digital signals to the terminal frame processing module; at the same time, decodes the digital signals sent by the terminal frame processing module and sends the decoded signals to the UE;

wherein the terminal frame processing module receives the digital signals sent by the signal codec module, encapsulates the signals and sends the encapsulated signals to the terminal electric/optical signal processing module; meanwhile, de-encapsulates the electric signal sent by the terminal electric/optical signal processing module and then sends the signal to the signal codec module; and

wherein the terminal electric/optical signal processing module converts the optical signal sent by an optical transmission unit into an electric signal and sends the electric signal to the terminal frame processing module; meanwhile, converts the electric signal sent by the terminal frame processing module into an optical signal and sends the optical signal to the optical transmission unit.

**Bisson** (*US PG PUB 2003/0026298*) teaches an optical fiber transmission system, comprising:

a terminal processing unit (*Fig. 2 is discloses a broad functional block diagram of the transmit node Tx, paragraph [0011], wherein the mapper/aggregator is further disclosed in Fig. 3 which shows the preparatory handling of the client line protocol data for processing by the matter and aggregator, paragraph [0012]*) including a signal codec module (*client LIU, Layer 1/2 8b/10b, Fig. 3b*), a terminal frame processing module (*STSI Mapping, Fig. 3b*), and a terminal electric/optical signal processing module (*Serializer and E/O, Fig. 40, Fig. 2*),

wherein the terminal processing unit, connecting with UE (user equipment) (*mapper/aggregator 10 is connected to the client 20, Fig. 2*), used for encapsulating and converting the signal of the UE (*protocol encapsulation is performed in the preparatory handling of the client line protocol data, Fig. 3b to processing by the mapper and aggregator, Fig. 3b*) to be transmitted into an optical signal (*signals from the mapper and aggregator and then transmission as an optical signal, Fig. 2*), as well as for de-encapsulating the signal from the optical transmission unit and sending the signal to the UE (*in bi-directional transmission, when the signal is to be received, the signal would be de-encapsulated because it was encapsulated at the transmitter*);

wherein the signal codec module encodes various signals sent by UE and sends the digital signals to the terminal frame processing module (*Client LIU Layer 1/2 8b/10b encodes the various signal from the client layer protocol, Fig. 3b, which will eventually be sent to the protocol encapsulation HDLC, Fig 3b, which is the terminal frame processing module*); at the

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same time, decodes the digital signals sent by the terminal frame processing module and sends the decoded signals to the UE (*in bi-directional transmission, when the signal is to be received, the signal would be decoded as signals as the inverse action and path are performed on the signal to recover it*);

wherein the terminal frame processing module receives the digital signals sent by the signal codec module (*protocol encapsulator receives signal from the client LIU Layer 1/2 8b/10b*), encapsulates the signals and sends the encapsulated signals (*Protocol encapsulation encapsulated received data frames into HDLC protocol framed, which continue on the to aggregator*) to the terminal electric/optical signal processing module (*signals from the aggregator 20 are eventually sent to the E/O converter 40, Fig. 2*); meanwhile, de-encapsulates the electric signal sent by the terminal electric/optical signal processing module and then sends the signal to the signal codec module (*in bi-directional transmission, when the signal is to be received, the signal would be de-encapsulated as signals as the inverse action and path are performed on the signal to recover it*); and

wherein the terminal electric/optical signal processing module converts the optical signal sent by an optical transmission unit into an electric signal and sends the electric signal to the terminal frame processing module (*in bi-directional transmission, when the signal is to be received, the signal would be returned to an electrical signal as it was converted to an optical signal at transmitter, shown in Fig. 2b, as signals as the inverse action and path are performed on the signal to recover it*); meanwhile, converts the electric signal sent by the terminal frame

processing module into an optical signal (*serializer and E/O convert the electrical signal from the mapper/aggregator 10 to an optical signal, Fig. 2*).

**Bisson** does not explicitly teach:

an optical transmission unit, and

a switch unit with input and output thereof connected with the optical transmission unit, respectively,

wherein the terminal processing unit sending the optical signal to the optical transmission unit,

wherein the optical transmission unit, connecting with the terminal processing unit and the switch unit respectively, used for multiplexing the encapsulated signal sent by the terminal processing unit and sending the multiplexed signal to the switch unit via an optical fiber; as well as for de-multiplexing the signal transmitted from the switch unit via an optical fiber and sending the de-multiplexed signal to the terminal processing unit;

wherein the switch unit, connecting with the optical transmission unit, used for receiving the multiplexed signal from the optical transmission unit at the input side thereof, de-multiplexing the signal, determining the transmission destination of the signal according to the type of the signal and sending out the signal; and at the same time for multiplexing the signal that needs to be transmitted to the optical transmission unit at the output side thereof, converting the multiplexed signal to an optical signal and sending out the signal.

wherein the terminal electric/optical signal processing module sends the electric signal to the terminal frame processing module; meanwhile, sends the optical signal to the optical transmission unit.

**Hahin** (*US PG PUB 2004/0244049*) teaches an optical fiber transmission system, comprising:

an optical transmission unit (*Hub 330, Fig. 13*), and

wherein the optical transmission unit (*Hub 330, Fig. 13*), connecting with the terminal processing unit (*receive signals from optical fibers 210, Fig. 13 and optical fibers 210 receive their optical transmitters, wherein it outputs a signal to optical fiber 210, Fig. 7*) used for multiplexing the signal sent by the terminal processing unit and sending the multiplexed signal via an optical fiber (*data frames received via optical fiber 210 are forwarded to a time division multiplexer or wavelength division multiplexer 334, Fig. 13, paragraph [0151], outputs a signal on to optical fiber 360, Fig. 13*); as well as for de-multiplexing the signal transmitted from the switch unit via an optical fiber and sending the de-multiplexed signal to the terminal processing unit (*when the signal is to be received, the signal would be de-multiplexed as signals as the inverse action and path are performed on the signal to recover it*).

**Hahin** does not explicitly teach:

a terminal processing unit including a signal codec module, a terminal frame processing module, and a terminal electric/optical signal processing module,

a switch unit with input and output thereof connected with the optical transmission unit, respectively,



wherein the terminal processing unit, connecting with UE (user equipment), used for encapsulating and converting the signal of the LTE to be transmitted into an optical signal and sending the optical signal to the optical transmission unit, as well as for de-encapsulating the signal from the optical transmission unit and sending the signal to the UE;

wherein the optical transmission unit, connecting with the switch unit respectively, used for multiplexing the encapsulated signal sent by the terminal processing unit and sending the multiplexed signal to the switch unit via an optical fiber; as well as for de-multiplexing the signal transmitted from the switch unit via an optical fiber and sending the de-multiplexed signal to the terminal processing unit;

wherein the switch unit, connecting with the optical transmission unit, used for receiving the multiplexed signal from the optical transmission unit at the input side thereof, de-multiplexing the signal, determining the transmission destination of the signal according to the type of the signal and sending out the signal; and at the same time for multiplexing the signal that needs to be transmitted to the optical transmission unit at the output side thereof, converting the multiplexed signal to an optical signal and sending out the signal;

wherein the signal codec module encodes various signals sent by UE and sends the digital signals to the terminal frame processing module; at the same time, decodes the digital signals sent by the terminal frame processing module and sends the decoded signals to the UE;

wherein the terminal frame processing module receives the digital signals sent by the signal codec module, encapsulates the signals and sends the encapsulated signals to the

terminal electric/optical signal processing module; meanwhile, de-encapsulates the electric signal sent by the terminal electric/optical signal processing module and then sends the signal to the signal codec module; and

wherein the terminal electric/optical signal processing module converts the optical signal sent by an optical transmission unit into an electric signal and sends the electric signal to the terminal frame processing module; meanwhile, converts the electric signal sent by the terminal frame processing module into an optical signal and sends the optical signal to the optical transmission unit.

**Yoneda** (*US Patent 5,493,423*) teaches an optical fiber transmission system, comprising:

a switch unit (*optical terminal apparatus 1, Fig. 1*) with input and output thereof connected with the optical transmission unit, respectively (*3 is a working transmission line and 4 is a protection transmission line, Fig. 2*),

wherein the switch unit (*optical terminal apparatus 1 or 2, Fig. 1, further disclosed in Fig. 1*) used for receiving the multiplexed signal from the optical transmission unit at the input side thereof, de-multiplexing the signal (*demultiplexer 12 demultiplexes a received signal that is obtained via the working transmission, and supplied the demultiplexed signal to the switching circuit line 3, Col 1, lines 36-39, wherein if the incoming signal is demultiplexed, it is understandable that it was multiplexed when it was originally received*), determining the transmission destination of the signal according to the type of the signal and sending out the signal (*the switching circuit 15 receives a transmission line supervision alarm signal ALMI*

*which is separated in the demultiplexer 12 and carried out a switching so that the main signals which are not in the alarm state are supplied to the channel part and the overhead signal OH is supplied to the overhead input/output circuit, Col 1, lines 56-62); and at the same time for multiplexing the signal that needs to be transmitted to the optical transmission unit at the output side thereof (the multiplexer 11 multiplexes the main signal from a channel part (no shown) of the optical terminal apparatus, and transmits a multiplex signal to the work transmission line, Col 1, lines 33-36),*

**Yoneda** does not explicitly teach:

a terminal processing unit including a signal codec module, a terminal frame processing module, and a terminal electric/optical signal processing module,

an optical transmission unit, and

wherein the terminal processing unit, connecting with UE (user equipment), used for encapsulating and converting the signal of the LIE to be transmitted into an optical signal and sending the optical signal to the optical transmission unit, as well as for de-encapsulating the signal from the optical transmission unit and sending the signal to the UE;

wherein the optical transmission unit, connecting with the terminal processing unit and the switch unit respectively, used for multiplexing the encapsulated signal sent by the terminal processing unit and sending the multiplexed signal to the switch unit via an optical fiber; as well as for de-multiplexing the signal transmitted from the switch unit via an optical fiber and sending the de-multiplexed signal to the terminal processing unit;

wherein the switch unit connecting with the optical transmission unit;

wherein the switch unit multiplexing the signal that needs to be transmitted to the optical transmission unit at the output side thereof;

converting the multiplexed signal to an optical signal and sending out the signal;

wherein the signal codec module encodes various signals sent by UE and sends the digital signals to the terminal frame processing module; at the same time, decodes the digital signals sent by the terminal frame processing module and sends the decoded signals to the UE;

wherein the terminal frame processing module receives the digital signals sent by the signal codec module, encapsulates the signals and sends the encapsulated signals to the terminal electric/optical signal processing module; meanwhile, de-encapsulates the electric signal sent by the terminal electric/optical signal processing module and then sends the signal to the signal codec module; and

wherein the terminal electric/optical signal processing module converts the optical signal sent by an optical transmission unit into an electric signal and sends the electric signal to the terminal frame processing module; meanwhile, converts the electric signal sent by the terminal frame processing module into an optical signal and sends the optical signal to the optical transmission unit.

Re claim 20, the prior art does not explicitly teach an optical fiber transmission method, comprising a transmitting process from UE to a remote end and a receiving process from a remote end to UE,

wherein the transmitting process comprises:

A, a terminal processing unit encoding and encapsulating the signal from the UE, converting the signal into an optical signal and then sending to an optical transmission unit;

B, the optical transmission unit multiplexing the optical signal and then sending the signal to a switch unit via optical fiber; and

C, the switch unit converting the multiplexed signal into an electric signal and de-multiplexing the signal, determining the destination optical transmission unit of the de-multiplexed signal according to the type of the signal and sending the signal; and

wherein the receiving process comprises:

D, the switch unit multiplexing the signal to be sent to the optical transmission unit, converting the multiplexed signal to an optical signal and then sending the signal to the destination optical transmission unit via optical fiber;

E, the optical transmission unit de-multiplexing the optical signal from the switch unit, and then sending the signal to the terminal processing unit; and

F, the terminal processing unit converting the optical signal from the optical transmission unit into an electric signal, de-encapsulating and decoding the electric signal based on the type of the signal, and then sending the signal to the UE.

**Bisson** (*US PG PUB 2003/0026298*) teaches an optical fiber transmission method, comprising a transmitting process from UE to a remote end and a receiving process from a remote end to UE (*end-to-end data transport link, Fig. 2, wherein there is a transmitter TX for clients 20i transmitting with clients at the receiver Rx 20j, Fig. 2*),

wherein the transmitting process comprises:

A, a terminal processing unit encoding and encapsulating the signal from the UE (*Fig. 3b illustrates the preparatory handling of the client line protocol data, paragraph [0012], which shows encoding via client LIU Layer 1/2 8b/10b and Protocol encapsulation HDLC and the signal is output to the aggregator, Fig. 3b.*), converting the signal into an optical signal and then sending (*signal from the mapper/aggregator 10 is eventually input into serializer and E/O, Fig. 2, which will convert the signal into an optical signal and send the signal out*);

wherein the receiving process comprises:

F, the terminal processing unit converting the optical signal from the optical transmission unit into an electric signal (*Demapper and Deaggreagtor 80, Fig. 2 received the optical signal converted into an electrical signal via O/E and De-serializer, Fig. 2*), de-encapsulating and decoding the electric signal based on the type of the signal, and then sending the signal to the UE (*when the signal is to be received, the signal would be de-encapsulated and decoded the inverse action and path are performed on the signal to recover it. It is eventually delivered to the clients 20j, Fig. 2*).

**Bisson** does not explicitly teach:

B, the optical transmission unit multiplexing the optical signal and then sending the signal to a switch unit via optical fiber; and

C, the switch unit converting the multiplexed signal into an electric signal and demultiplexing the signal, determining the destination optical transmission unit of the demultiplexed signal according to the type of the signal and sending the signal; and

D, the switch unit multiplexing the signal to be sent to the optical transmission unit, converting the multiplexed signal to an optical signal and then sending the signal to the destination optical transmission unit via optical fiber;

E, the optical transmission unit de-multiplexing the optical signal from the switch unit, and then sending the signal to the terminal processing unit; and

**Hahin** (*US PG PUB 2004/0244049*) teaches teach an optical fiber transmission method, comprising a transmitting process from UE to a remote end and a receiving process from a remote end to UE,

wherein the transmitting process comprises:

B, the optical transmission unit multiplexing the optical signal and then sending the signal via optical fiber (*Hub 330 receive signals from optical fibers 210, Fig. 13 and optical fibers 210 receive their optical transmitters, wherein it outputs a signal to optical fiber 210, Fig. 7. Data frames received via optical fiber 210 are forwarded to a time division multiplexer or wavelength division multiplexer 334, Fig. 13, paragraph [0151], outputs a signal on to optical fiber 360, Fig. 13*); and

wherein the receiving process comprises:

E, the optical transmission unit de-multiplexing the optical signal from the switch unit, and then sending the signal to the terminal processing unit (*when the signal is to be received, the signal would be de-multiplexed as signals as the inverse action and path are performed on the signal to recover it*); and

**Hahin** does not explicitly teach:

A, a terminal processing unit encoding and encapsulating the signal from the UE, converting the signal into an optical signal and then sending to an optical transmission unit;

C, the switch unit converting the multiplexed signal into an electric signal and demultiplexing the signal, determining the destination optical transmission unit of the demultiplexed signal according to the type of the signal and sending the signal; and

D, the switch unit multiplexing the signal to be sent to the optical transmission unit, converting the multiplexed signal to an optical signal and then sending the signal to the destination optical transmission unit via optical fiber;

F, the terminal processing unit converting the optical signal from the optical transmission unit into an electric signal, de-encapsulating and decoding the electric signal based on the type of the signal, and then sending the signal to the UE.

**Yoneda** (*US Patent 5,493,423*) teaches teach an optical fiber transmission method, comprising a transmitting process from UE to a remote end and a receiving process from a remote end to UE,

wherein the transmitting process comprises:

C, the switch unit converting the multiplexed signal into an electric signal and demultiplexing the signal (*optical terminal apparatus 1 or 2, Fig. 1, further disclosed in Fig. 2. Demultiplexer 12 demultiplexes a received signal that is obtained via the working transmission, and supplied the demultiplexed signal to the switching circuit line 3, Col 1, lines 36-39, wherein if the incoming signal is demultiplexed, it is understandable that it was multiplexed when it was originally received*) and determining the destination optical transmission unit of the de-



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multiplexed signal according to the type of the signal and sending the signal (*the switching circuit 15 receives a transmission line supervision alarm signal ALM1 which is separated in the demultiplexer 12 and carried out a switching so that the main signals which are not in the alarm state are supplied to the channel part and the overhead signal OH is supplied to the overhead input/output circuit, Col 1, lines 56-62; and*

wherein the receiving process comprises:

D, the switch unit multiplexing the signal to be sent to the optical transmission unit, converting the multiplexed signal to an optical signal and then sending the signal via optical fiber (*the multiplexer 11 multiplexes the main signal from a channel part (no shown) of the optical terminal apparatus, and transmits a multiplex signal to the work transmission line, Col 1, lines 33-36;*

**Yoneda** does not explicitly teach:

A, a terminal processing unit encoding and encapsulating the signal from the UE, converting the signal into an optical signal and then sending to an optical transmission unit;

B, the optical transmission unit multiplexing the optical signal and then sending the signal to a switch unit via optical fiber; and

E, the optical transmission unit de-multiplexing the optical signal from the switch unit, and then sending the signal to the terminal processing unit; and

F, the terminal processing unit converting the optical signal from the optical transmission unit into an electric signal, de-encapsulating and decoding the electric signal based on the type of the signal, and then sending the signal to the UE.

Re claim 28, the prior art does not explicitly teach a terminal processing unit for use in an optical fiber transmission system, comprising a signal codec module, a terminal frame processing module, a terminal electric/optical signal processing module, a control and management information processing module, and a terminal overhead processing module, wherein

the signal codec module encodes various signals sent by UE and sends the digital signals to the terminal frame processing module; at the same time, decodes the digital signals sent by the terminal frame processing module and sends the decoded signals to the UE;

the terminal frame processing module receives the digital signals sent by the signal codec module, encapsulates the signals and sends the encapsulated signals to the terminal electric/optical signal processing module; meanwhile, de-encapsulates the electric signal sent by the terminal electric/optical signal processing module and then sends the signal to the signal codec module;

the terminal electric/optical signal processing module converts the optical signal sent by an optical transmission unit into an electric signal and sends the electric signal to the terminal frame processing module; meanwhile, converts the electric signal sent by the terminal frame processing module into an optical signal and sends the optical signal to the optical transmission unit;

the control and management information processing module generates a corresponding control and management message and sends the message to the terminal

overhead processing module; meanwhile, receives the control and management message, sent by, the terminal overhead processing module;

the terminal overhead processing module further comprises an overhead generation module and an overhead extraction module; the input of the overhead generation module is connected with the control and management information processing module, the output of the overhead generation module is connected with the terminal frame processing module; the input of the overhead extraction module is connected with the terminal frame processing module, and the output of the overhead extraction module is connected with the control and management information processing module.

Steensma (US Patent 4450544) teaches a terminal processing unit for use in an optical fiber transmission system, comprising a signal codec module (1 and 7, Fig. 1), a terminal frame processing module (2 and 6, Fig. 2), and a terminal electric/optical signal processing module (3 and 5, Fig. 2), wherein

the signal codec module encodes various signals sent by UE and sends the digital signals to the terminal frame processing module (1, Fig. 1, *a Continuously variable slope delta CSVD encoder receives signals from the voice user, performs encoding, and then send the signal to the packetizer 2, fig. 1, Col.3, lines 23-32*); at the same time, decodes the digital signals sent by the terminal frame processing module and sends the decoded signals to the UE (2, Fig. 1, *a continuously variable slope delta Decoder receives signals from a depacketizer 6, Fig. 1, which is part of the terminal frame processing module, and sends decoded signals to the voice user, Col 3, lines 32-35*);

the terminal frame processing module receives the digital signals sent by the signal codec module (*packetizer 2, Fig. 1, which is part of the terminal frame processing module, receives signals sent by the continuously variable delta CVSD encoder, Col. 3, lines 23-32, where the signals are digital Col. 6, lines 43-46) which is part of the codec module*), encapsulates the signals (*the packetizer will form a packet from the user data source Col. 7, lines 59-61, which is equivalent to encapsulation*) and sends the encapsulated signals to the terminal electric/optical signal processing module (*the signal from the packetizer 2 then sent on to the optical transmitter 3, which is an interface between the terminal electronic and the fiber optic transmission medium, Col. 9, lines 10-12. It is inherent that the optical transmitter is an electric/optical signal processing unit because it is necessary for the signal to propagate in a optical transmission medium to be transformed from an electric signal to an optical signal*); meanwhile, de-encapsulates the electric signal sent by the terminal electric/optical signal processing module (*the signals at the depacketizer 6 are received from the optical receiver, which is part of the terminal electric/optical signal processing module and is depacketized or de-encapsulated, Fig. 1*) and then sends the signal to the signal codec module (*the signal from the depacketizer is then sent to the CVSD decoder 2, Fig. 1*);

the terminal electric/optical signal processing module converts the optical signal sent by an optical transmission unit into an electric signal and sends the electric signal to the terminal frame processing module (*the optical receiver also acts as an interface between the optical transmission medium 4 and the electric devices, 6 and 7, and therefore, it is inherent that the optical receiver transforms the optical signal into an electric signal, Fig. 1*); meanwhile,

converts the electric signal sent by the terminal frame processing module into an optical signal and sends the optical signal to the optical transmission unit *(the signal from the packetizer 2 then sent on to the optical transmitter 3, which is an interface between the terminal electronic and the fiber optic transmission medium, Col. 9, lines 10-12. It is inherent that the optical transmitter is an electric/optical signal processing unit because it is necessary for the signal to propagate in an optical transmission medium to be transformed from an electric signal to an optical signal).*

3. The following patents and patent applications are cited to show the state of the art with respect to optical transmission networks pertaining concerning encapsulating and multiplexing:

(US-20020196784, US-2002003211, US-20070088971, US-6788664, US-6714560, US-5365518, US-20040037239, US-5884148, US-7082132, US-7031343, US-20030053168, US-5727051, US-6636529, US-5224108, US-7031465, US-5550818, US-20060146855, US-20070183779, US-20040120319, US-5488500, US-20060018334, US-5140585, US-20030120799, US-5857092, US-5570355, US-5442636, US-5144466, US-20040246989, US-6778550, US-20070031148, US-20030035445, US-2004172658, US-20030081619)

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TANYA NGO whose telephone number is (571) 270-7488.

The examiner can normally be reached on M - F from 9 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye can be reached on (571) 272-3078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ngo/  
April 15, 2010

/Kenneth N Vanderpuye/  
Supervisory Patent Examiner, Art Unit 2613